

What is claimed is:

1. A method comprising:

receiving a request for access to a service;

5 collecting a biometric sample from a user associated with the request;

comparing the biometric sample to a biometric template associated with the user;

and

providing access to a private key in accordance with a result of the comparing

step.

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2. A method according to claim 1, further comprising:

if the result indicates a match, generating a digital signature using the private key

to the user.

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3. A method according to claim 2, further comprising:

providing the digital signature to the service associated with the request.

4. A method according to claim 1, further comprising:

providing a biometric signature corresponding to the collected biometric sample

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to the service associated with the request.

5. A method according to claim 4, further comprising:

allowing the service to determine whether to fulfill a transaction corresponding to the request in accordance with the result of the comparing step.

5 6. A method according to claim 1, further comprising:

generating pre-enrollment keys for the user;

supplying the pre-enrollment keys to respective key generators; and

generating a final enrollment key for the user only if keys provided by a key

administrator match the pre-enrollment keys supplied to the key generators, the key

10 administrator being a person different than the key generators.

7. A method according to claim 6, further comprising:

verifying registration of the user in accordance with a comparison of the final enrollment key;

15 creating the biometric template for the user only if registration is verified; and

generating the private key only if the biometric template is successfully created.

8. A method according to claim 6, further comprising associating user identification

information with the final enrollment key.

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9. A method according to claim 1, further comprising:

encrypting the collected biometric sample for transmission to an authentication server; and

including integrity information in the encrypted biometric sample.

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10. A method according to claim 9, further comprising:

decrypting the encrypted biometric sample at the authentication server; and

checking the integrity information included with the biometric sample.

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11. A method according to claim 9, wherein the integrity information includes a unique transaction identifier.

12. A method according to claim 1, further comprising:

associating user identification information with the private key; and

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maintaining a digital certificate containing the user identification information and a public key corresponding to the private key.

13. A method according to claim 1, wherein the biometric sample includes a fingerprint

scan.

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14. An apparatus comprising:

means for receiving a request for access to a service;

means for collecting a biometric sample from a user associated with the request;  
means for comparing the biometric sample to a biometric template associated  
with the user; and  
means for providing access to a private key in accordance with a result of the  
5 comparing step.

15. An apparatus according to claim 14, further comprising:

if the result indicates a match, means for generating a digital signature using the  
private key to the user.

16. An apparatus according to claim 15, further comprising:

means for providing the digital signature to the service associated with the  
request.

17. An apparatus according to claim 14, further comprising:

means for providing a biometric signature corresponding to the collected  
biometric sample to the service associated with the request.

18. An apparatus according to claim 17, further comprising:

means for allowing the service to determine whether to fulfill a transaction  
corresponding to the request in accordance with a result of the comparing means.

19. An apparatus according to claim 14, further comprising:

means for generating pre-enrollment keys for the user;

means for supplying the pre-enrollment keys to respective key generators; and

means for generating a final enrollment key for the user only if keys provided by

5 a key administrator match the pre-enrollment keys supplied to the key generators, the key administrator being a person different than the key generators.

20. An apparatus according to claim 19, further comprising:

means for verifying registration of the user in accordance with a comparison of

10 the final enrollment key;

means for creating the biometric template for the user only if registration is

verified; and

means for generating the private key only if the biometric template is successfully

created.

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21. An apparatus according to claim 19, further comprising means for associating user identification information with the final enrollment key.

22. An apparatus according to claim 14, further comprising:

20 means for encrypting the collected biometric sample for transmission to an authentication server; and

means for including integrity information in the encrypted biometric sample.

23. An apparatus according to claim 22, further comprising:

means for decrypting the encrypted biometric sample at the authentication server;

and

means for checking the integrity information included with the biometric sample.

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24. An apparatus according to claim 22, wherein the integrity information includes a

unique transaction identifier.

25. An apparatus according to claim 14, further comprising:

means for associating user identification information with the private key; and

means for maintaining a digital certificate containing the user identification

information and a public key corresponding to the private key.

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26. An apparatus according to claim 14, wherein the biometric sample includes a

fingerprint scan.

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27. An authentication infrastructure comprising:

a server that intercepts requests for access to a service; and

a client that collects a biometric sample from a user associated with the request,

wherein the server maintains a biometric template associated with the user for

authenticating the collected biometric sample, and

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wherein the server provides access to a private key in accordance with a result of the authentication, so that the user need not maintain a token for accessing the service.

28. An authentication infrastructure according to claim 27, wherein the private key is  
5 used to sign a message for allowing the user to perform a transaction with the service, the service obtaining a corresponding public key from the server.